Smart Data

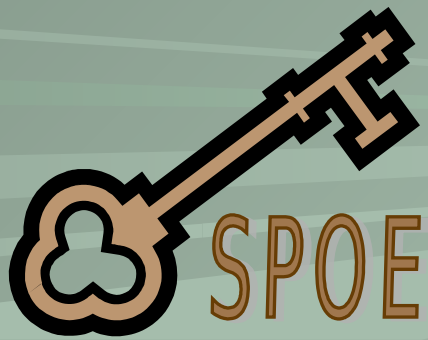
Smart Grid

Smart Services

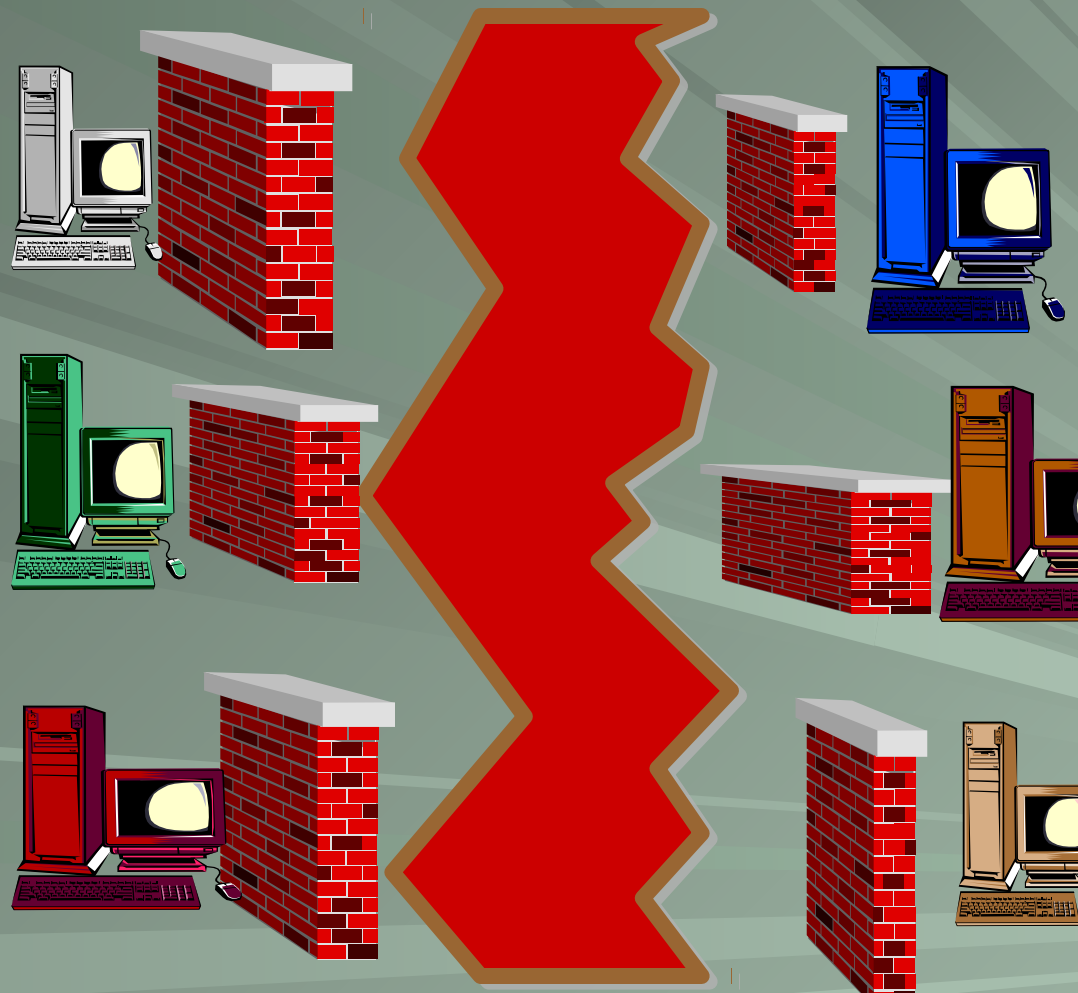
Single Point of Entry (SPOE)

A Service-Oriented Strategy For Enterprise Integration

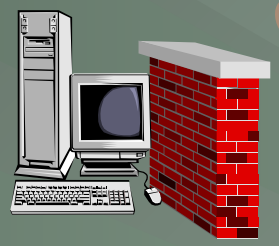
Trading Partner Visibility

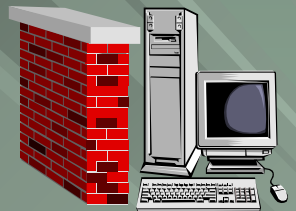


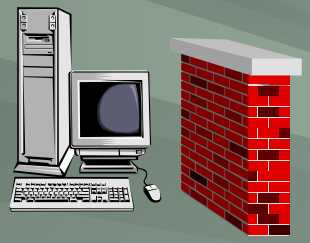
Defense Supply Chain Visibility Gap

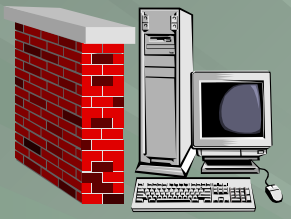


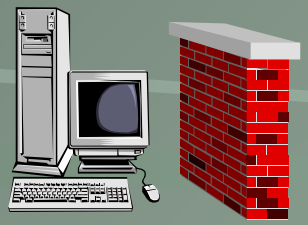
Solution & Capability

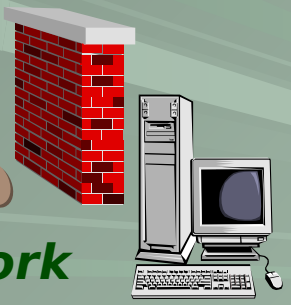


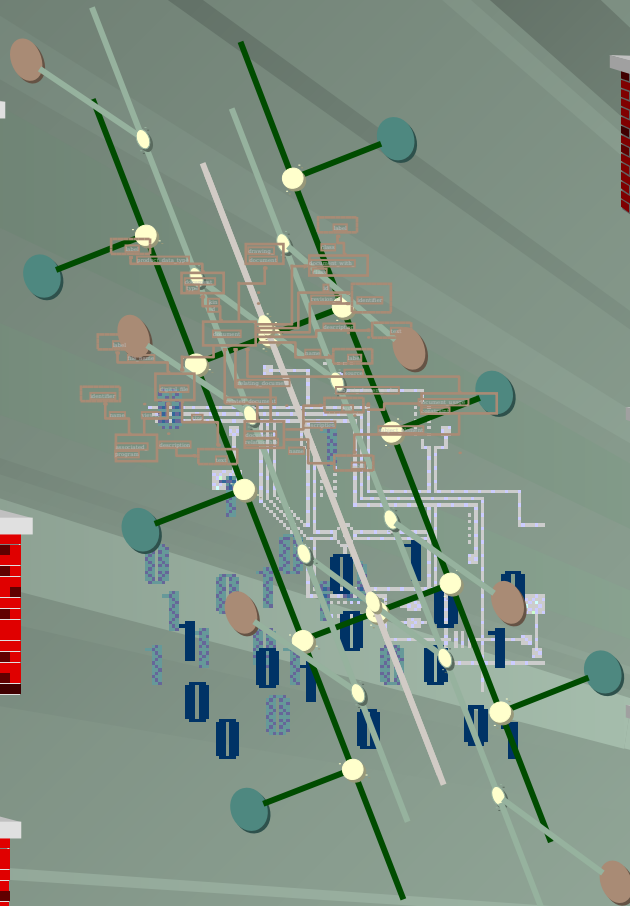












Shared Global Network
Smart Grid

SPOE Visibility

- Improve defense industrial visibility by providing industry with a common net-centric integration solution for connecting their information systems with the government enterprise

➢ A web services framework of the standards, processes, business rules, and business integration language for business process flow through a shared network

❖ Specify, develop, demonstrate, initiate SPOE operations

SPOE Benefits

Business Process Transformation
Demands Integration Across Boundaries

- ✓ Eliminate point-to-point connectivity between defense contractors and government sites
- ✓ Automate system acquisition products delivery
- ✓ Facilitate end-to-end supply chain and other processes
- ✓ Enable new processes and alternative business models
- ✓ Enable dynamic UID (asset accountability, configuration management)

SPOE ELEMENTS

Web Services Grid Framework

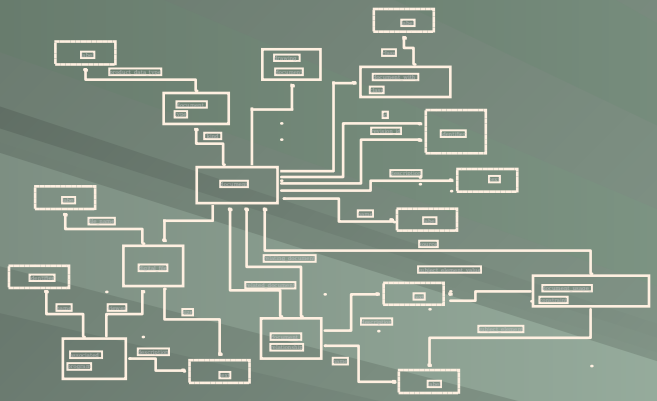
- Published protocols for exchange of data and services
- Trading partners implement protocols to connect with SPOE Grid
- Based on commercial best practices
- Compliant with net-centricity
- Includes security, information assurance

SPOE Elements

SPOE Enterprise Server

- Operational site for management of data indexed with SPOE
- Provides services associated with data hub
- Supports additional business processes as required
- Multiple sites: government, industry, value-added
- Enforces the framework
- Supports error recovery, continuity of operations
- COTS based

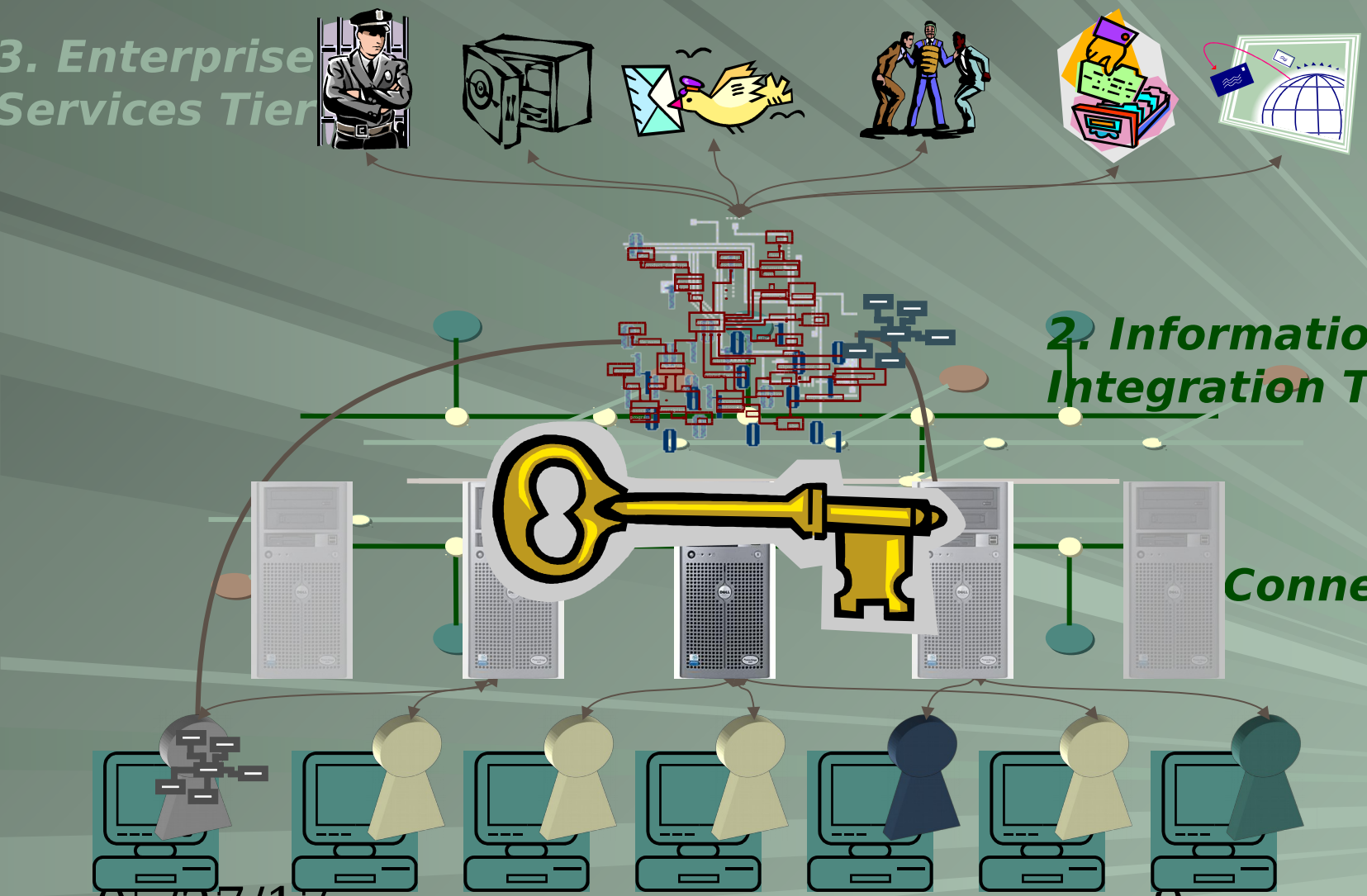
SPOE Features



mart Information Standards
Model-driven Exchange

- Current business information objects encoded as formal information models --Business Information Objects (BIOS)
  - Based on internationally recognized standards, i.e., Product Life Cycle Support (PLCS ISO 10303)
  - Based on advanced information web languages

Three-Tier Architecture

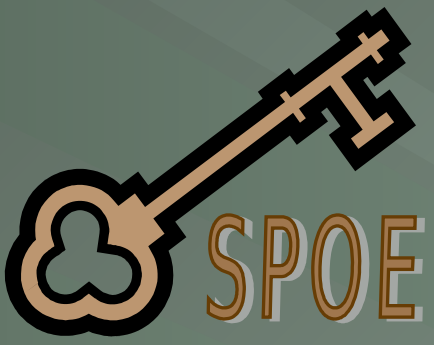


SPOE Versus EIDE

- **SPOE**
  - Integrates industrial base
  - Feeds are all industrial tiers
  - May interact with industry information brokers
  - Addresses commercial integration standards
  - Addresses and complies with commercial security considerations in an open environment
  - SPOE is not a single site; it is net-centric
- **EIDE**
  - Integrates government enclave
  - Feeds are Service/Agency Integrated Data Environments
  - Interaction with outside information brokers unknown
  - Integration procedures negotiated within DoD
  - Addresses DoD security requirements in a closed environment
  - Site specificity of EIDE unclear

Action Plan

- **FY-05 SPOE Requirements Definition**
  - Operational Description Document
  - Operational architecture and SPOE Enterprise Server system architecture
  - Use case collection based on JSF
  - Business information object collection
- **FY-06 Design & Prototype**
  - Framework creation, coordination, publication
  - Prototype site selection
  - Initial industry and government user base
  - Initial use cases and business information objects
  - Prototype server acquisition and installation
  - Prototype operations, test, evaluation & validation



Action Plan

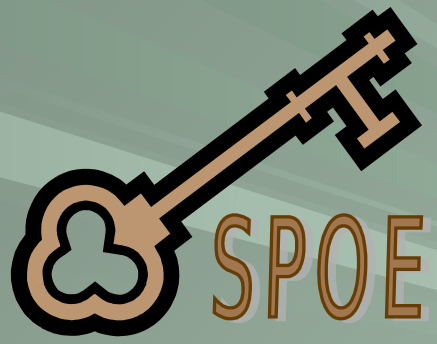
- FY-07 Initial Operating Capability
  - Refine formally publish framework
  - Expand operations of prototype SPOE Enterprise Server and site
  - Publish SPOE Enterprise Server Specification
  - Extend use cases if required
  - Convert additional business information objects
  - Formalize business case/model
- FY-08 Full Operating Capability
  - Convert additional business information objects
  - Add additional SPOE services, if required
  - Support SPOE Site developers/installers

Good News

- Virtual exchange vice fixed integration point
  - Not platform dependent
  - Not site dependent
  - Can accommodate multiple coop/security strategies
- Incremental integration vice big bang
  - New integrations do not disturb legacy integrations
  - Synchronization of budgets and schedules not required
- Enterprise context versus stovepiping
  - Local information models are maintained as enterprise interoperability is achieved
- Reduction of glue code over point to point integration
  - Mediation requires less custom code than point to point integration
  - SPOE eliminates Interface Adaptor requirements

JSF Single Point of Entry

Web-Services Protocols & Business Information Objects
Enabling Information Interoperability Among Qualified Trading Partners



Sikorsky Single Point of Entry

Web-Services Protocols & Business Information Objects
Enabling Information Interoperability Among Qualified Trading Partners